Patent
Attorney's Docket No. **F0682**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	**Mail Stop: APPEAL BRIEF - PATENTS**
Yatin R. ACHARYA	Group Art Unit: 2157
Application No.: 09/768,293	Examiner: A. Salad
Filed: January 25, 2001	
For: SELF-CONFIGURING TRUNKING ON A NETWORK DEVICE	

U.S. Patent and Trademark Office
Customer Window, Mail Stop Appeal Brief Patents
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

REQUEST FOR REINSTATEMENT OF APPEAL

Sir:

In response to the non-final Office Action, dated May 18, 2005, that reopened prosecution in this application, Appellant respectfully requests reinstatement of the appeal. A Supplemental Appeal Brief accompanies this request.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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PATENT
Docket No. **F0682**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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SUPPLEMENTAL APPEAL BRIEF

This Supplemental Appeal Brief is submitted in response to the non-final Office Action, dated May 18, 2005, and in support of the Notice of Appeal, filed January 19, 2005.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Advanced Micro Devices, Inc.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

Appellant is unaware of any related appeals, interferences or judicial proceedings.

III. STATUS OF CLAIMS

Claims 1-18 are pending in this application.

Claims 1-18 were rejected in the Office Action, dated May 18, 2005, and are the subject of the present appeal. These claims are reproduced in the Claim Appendix of this Appeal Brief.

IV. STATUS OF AMENDMENTS

No Amendment was filed subsequent to the non-final Office Action, dated May 18, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In the paragraphs that follow, each of the independent claims and means plus function claims that is involved in this appeal and each dependent claim that is argued separately will be recited followed in parenthesis by examples of where support can be found in the specification and drawings.

Claim 1 recites a method for establishing a trunk between first and second network devices (150/350, 180, Fig. 3). The method includes monitoring, via the first network device, at least one of a source address or destination address in packets destined for or received from the second network device (410, Fig. 4; pg. 8, lines 16-20); determining, based on the monitoring, whether a communication pattern exists (420, Fig. 4; pg. 8, lines 20-23); and automatically establishing the trunk between the first network device and second network device when the communication pattern is determined to exist (430, Fig. 4; pg. 8, lines 24-27).

Claim 5 recites that the automatically establishing the trunk includes automatically establishing two or more trunks between the first network device and second network device (pg.

8, lines 25-27; pg. 9, lines 16-19).

Claim 7 recites deactivating the trunk when the communication pattern is determined to no longer exist and reassigning the ports to new trunks if a new pattern is determined (180, Fig. 3; pg. 9, lines 22-24).

Claim 8 is directed to a system for establishing at least one trunk between a first network device (180, Fig. 3) and a second network device (150/350, Fig. 3). The system includes means for monitoring at least one of traffic to the second network device or traffic from the second network device (180, Fig. 3; 245, Fig. 2; 410, Fig. 4; pg. 8, lines 16-20); means for determining, based on the monitoring, if a communication pattern exists (180, Fig. 3; 420, Fig. 4; pg. 20-23); and means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist (180, Fig. 3; 430, Fig. 4; pg. 8, lines 24-27).

Claim 12 recites that the means for automatically establishing the at least one trunk further comprises associating one or more trunk control bits with each port, the trunk control bits indicating a status of the port (180, Fig. 3; pg. 8, line 27, to pg. 9, line 6).

Claim 13 recites means for deactivating the at least one trunk when the communication pattern is determined to no longer exist (180, Fig. 3; pg. 9, lines 22-24).

Claim 14 is directed to network device (180, Fig. 3) comprising a receiver configured to receive packets having a source address and a destination address (205, Fig. 2; pg. 4, line 28, to pg. 5, line 3); and an internal rules checker (245, Fig. 2) configured to monitor the received source and destination addresses in the received packets (410, Fig. 4; pg. 8, lines 16-20), determine whether a communication pattern exists over a predetermined period of time (420, Fig.

4; pg. 20-23), and establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists (430, Fig. 4; pg. 8, lines 24-27).

Claim 16 recites that the internal rules checker is further configured to deactivate the one or more trunks when the communication pattern is determined to no longer exist (180, Fig. 3; pg. 9, lines 22-24).

Claim 18 recites at least one register configured to store trunking information (250, Fig. 2; pg. 8, lines 27-31). Claim 18 further recites that when establishing the one or more trunks, the internal rules checker sets at least one bit in the at least one register based on the determined communication pattern (245, Fig. 2; pg. 8, line 28, to pg. 9, line 16).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-6, 8-11, 14, 15, and 17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wong et al. (U.S. Patent Application Pub. No. 2004/0037278) in view of Chaudri et al. (U.S. Patent No. 6,275,861).

B. Claims 7, 13, and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wong et al. (U.S. Patent Application Pub. No. 2004/0037278) in view of Chaudri et al. (U.S. Patent No. 6,275,861), and further in view of Friedman et al. (U.S. Patent No. 5,949,788).

C. Claims 12 and 18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wong et al. (U.S. Patent Application Pub. No. 2004/0037278) in view of Chaudri et al. (U.S. Patent No. 6,275,861), and further in view of Annaamalai et al. (U.S. Patent No. 6,445,715).

VII. ARGUMENTS

A. The rejection under 35 U.S.C. § 103(a) based on Wong et al. (U.S. Patent Application Pub. No. 2004/0037278) and Chaudri et al. (U.S. Patent No. 6,275,861) should be reconsidered and withdrawn.

The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention always rests upon the Examiner. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual basis to support the conclusion of obviousness. In re Warner, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). Based upon the objective evidence of record, the Examiner is required to make the factual inquiries mandated by Graham v. John Deere Co., 86 S.Ct. 684, 383 U.S. 1, 148 USPQ 459 (1966). The Examiner is also required to explain how and why one having ordinary skill in the art would have been realistically motivated to modify an applied reference and/or combine applied references to arrive at the claimed invention. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

In establishing the requisite motivation, it has been consistently held that the requisite motivation to support the conclusion of obviousness is not an abstract concept, but must stem from the prior art as a whole to impel one having ordinary skill in the art to modify a reference or to combine references with a reasonable expectation of successfully achieving some particular realistic objective. See, for example, Interconnect Planning Corp. v. Feil, 227 USPQ 543 (Fed. Cir. 1985). Consistent legal precedent admonishes against the indiscriminate combination of prior art references. Carella v. Starlight Archery, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657

(Fed. Cir. 1985).

1. Claims 1-4 and 6.

With the above principles in mind, Appellant's claim 1 is directed to a method for establishing a trunk between first and second network devices. The method includes monitoring, via the first network device, at least one of a source address or destination address in packets destined for or received from the second network device; determining, based on the monitoring, whether a communication pattern exists; and automatically establishing the trunk between the first network device and second network device when the communication pattern is determined to exist. Wong et al. and Chaudri et al., whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

At the outset, Appellant notes that the Examiner improperly (and likely unintentionally) references Wyatt and Wong et al. in the body of the rejection of claim 1. Appellant assumes that the references to Wyatt are intended to be to Wong et al. and the references to Wong et al. are intended to be to Chaudri et al., based on the sections of those references on which the Examiner relies for teaching the features of Appellant's claim 1.

Wong et al. and Chaudri et al. do not disclose or suggest monitoring, via the first network device, at least one of a source address or destination address in packets destined for or received from the second network device, as recited in claim 1. The Examiner relies on Fig. 1 and para. 0030 of Wong et al. for allegedly disclosing this feature (Office Action, pg. 3). Appellant respectfully disagrees with the Examiner's interpretation of this section of Wong et al.

In Fig. 1, Wong et al. depicts a network system 2 that includes a packet switch 10 that connects to a server 3 and a group of clients via a switch 7. The Examiner relies on packet

switch 10 as allegedly corresponding to the recited first device and on server 3 as allegedly corresponding to the second network device (Office Action, pg. 3). With this interpretation in mind, this figure of Wong et al. in no way discloses or suggests monitoring, via packet switch 10, at least one of a source address or destination address in packets destined for or received from server 3, as would be required by the Examiner's interpretation of claim 1.

At para. 0030, Wong et al. discloses:

> FIG. 1 shows a schematic block diagram at 2 of an exemplary local area network system employing methods and apparatus for load balancing in trunking and link aggregation in accordance with the present invention. The network system 2 includes: a high speed server 3 having a plurality of network ports 4 for transmitting and receiving data packets via corresponding network links; a plurality of clients 5 each having at least one network port 6 for transmitting and receiving data packets to and from device including the server 3 via corresponding network data streams; a packet switch 7 having a plurality of client network ports 8 for transmitting and receiving data packets to and from corresponding ones of the clients 5 via corresponding network links, and a plurality of network ports 9; and a packet switch 10 providing load balancing for trunked, or aggregated, links in accordance with the present invention as further explained below.

This section of Wong et al. discloses that clients 5 include a network port 6 for transmitting and receiving data packets to and from server 3. As set forth above, the Examiner relies on packet switch 10 as allegedly corresponding to the recited first device and on server 3 as allegedly corresponding to the second network device (Office Action, pg. 3). This section of Wong et al. is in no way related to monitoring, via packet switch 10, at least one of a source address or destination address in packets destined for or received from server 3, as would be required by the Examiner's interpretation of claim 1.

Wong et al. and Chaudri et al. do not further disclose or suggest automatically establishing the trunk between the first network device and second network device when the

communication pattern is determined to exist, as also recited in claim 1. The Examiner relies on Fig. 1, and paras. 0033, 0036, and 0042, of Wong et al. for allegedly disclosing automatically establishing a trunk between a first network device and a second network device (Office Action, pg. 3). Appellant submits that the Examiner has misinterpreted the above feature of claim 1.

Claim 1 does not merely recite automatically establishing a trunk between a first network device and a second network device. Instead, claim 1 specifically recites automatically establishing the trunk between the first network device and second network device when the communication pattern is determined to exist between the first network device and the second network device. The Examiner does not address this feature in the Office Action. Therefore, the Examiner has not established a *prima facie* basis for denying patentability with respect to claim 1.

Moreover, the Examiner admits that Wong et al. does not disclose determining, based on the monitoring, whether a communication pattern exists. Therefore, the Examiner cannot reasonably allege that Wong et al. discloses automatically establishing the trunk between the first network device and second network device when the communication pattern is determined to exist between the first network device and the second network device, as recited in claim 1.

Nevertheless, Fig. 1 of Wong et al. depicts a trunk T_3 between packet switch 10 (which the Examiner alleges corresponds to the first network device recited in claim 1) and server 3 (which the Examiner alleges corresponds to the second network device recited in claim 1). This figure of Wong et al. in no way discloses or suggests that trunk T_3 is automatically established or that trunk T_3 is automatically established when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of

Appellant's claim 1. Instead, Wong et al. merely discloses that trunked links and trunked ports are formed by aggregating any integer number of ports 14 and links 15 (para. 0033).

At para. 0033, Wong et al. discloses:

> The packet switch 10 includes means for link aggregation and trunking wherein a plurality of trunked links 17 are formed by aggregating sets of four of the network links 15 as further explained below. In one embodiment, the packet switch 10 may include a maximum of eight trunked ports designated P_0, P_1, P_2, P_3, P_4, P_5, P_6, and P_7 formed by aggregating ports A_0-A_3, ports A_4-A_7, ports B_0-B_3, ports B_4-B_7, ports C_0-C_3, and ports C_4-C_7, ports D_0-D_3, and ports D_4-D_7 respectively. In the depicted embodiment, the packet switch 10 includes seven trunked ports designated P_0, P_1, P_2, P_3, P_4, P_5, and P_7 wherein ports C_0-C_3 are not trunked. Port C_0 is shown to be coupled to a CLIENT_7 via one of the regular non-trunking network links 15. The eight trunked ports P_0, P_1, P_2, P_3, P_4, P_5, and P_7 are respectively coupled to eight trunked links designated T_0, T_1, T_2, T_3, T_4, T_5, and T_7. In varying embodiments of the present invention, switch 10 may include any integer number of ports 14, and trunked ports and trunked links may be formed by aggregating any integer number of ports 14 and links 15.

This section of Wong et al. merely discloses that that trunked links and trunked ports are formed by aggregating any integer number of ports 14 and links 15. This section of Wong et al. in no way discloses or suggests that trunk T_3 is automatically established or that trunk T_3 is automatically established when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 1.

At para. 0036, Wong et al. discloses:

> Each of the plurality of clients 5 communicates with the server 3 via the network links and the switches 7 and 10. Because traffic is heavy between the server 3 and the plurality of clients 5, it is desirable to provide a communication link having a maximized bandwidth between the clients 5 and server 3. In the depicted embodiment, the ports B_4-B_7 of switch 10 are respectively connected to the ports 4 designated S_0-S_3 of the server 3 via the trunked link T_3, and the ports D_4-D_7 of switch 10 are respectively connected to the ports 9 designated SW_0-SW_3 of the switch 7 via the trunked link T_6. Data streams are provided between the server 3

> and the plurality of clients 5 via the trunked link T_3, switch 10, trunked link T_6, and switch 7.

This section of Wong et al. merely discloses that a trunk T_3 exists between packet switch 10 and server 3. This section of Wong et al. in no way discloses or suggests that trunk T_3 is automatically established or that trunk T_3 is automatically established when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 1.

At para. 0042, Wong et al. discloses:

> In accordance with a first MAC address table based load balancing scheme, further described below, the load balancing unit 190 implements a dynamic trunked port mapping scheme wherein the destination port for a particular packet (selected from the plurality of ports of its corresponding destination trunked link) is determined based on the source address of the packet.

This section of Wong et al. merely discloses that load balancing unit 190 implements a dynamic trunked port mapping scheme where a destination port for a packet is determined based on the source address of the packet. This section of Wong et al. in no way discloses or suggests that trunk T_3 is automatically established or that trunk T_3 is automatically established when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 1.

Appellant notes that Chaudri et al. does not disclose or suggest establishing trunks between network devices. Therefore, Chaudri et al. cannot disclose or suggest automatically establishing a trunk between the first network device and second network device when the communication pattern is determined to exist between the first network device and the second network device, as recited in claim 1.

The Examiner relies on Chaudri et al. for allegedly disclosing determining, based on the monitoring, whether a communication pattern exists and alleges that it would have been obvious to incorporate this feature of Chaudri et al. into the Wong et al. system to allow for "special handling of those packets within that device or by other networking devices in the network" (Office Action, pg. 3). Appellant submits that Examiner's motivation is merely conclusory and insufficient for establishing a *prima facie* case of obviousness. The Examiner's motivation falls short of logically explaining why one skilled in the art would be realistically motivated to combine Chaudri et al.'s alleged teaching of determining, based on the monitoring, whether a communication pattern exists into the Wong et al. system. Moreover, the Examiner does not point to any section of Wong et al. or Chaudri et al. to support the Examiner's allegation. Appellant submits that the Examiner motivation is impermissibly based on hindsight.

For at least the foregoing reasons, Appellant submits that the rejection of claim 1 under 35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

Claims 2-4 and 6 depend from claim 1. Therefore, Appellant requests that the rejection of claims 2-4 and 6 under 35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. be reconsidered and withdrawn for at least the reasons given above with respect to claim 1.

2. Claim 5.

Claim 5 depends from claim 1. Therefore, claim 5 is patentable over Wong et al. and Chaudri et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, claim 5 recites a further feature that is not disclosed or suggested by Wong et al. and Chaudri et al.

Claim 5 recites that the automatically establishing a trunk includes automatically establishing two or more trunks between the first network device and second network device. The Examiner does not address this feature in the Office Action. Accordingly, a *prima facie* case of obviousness has not been established with respect to claim 5.

Nevertheless, as set forth above with respect to claim 1, the Examiner admits that Wong et al. does not disclose determining whether a communication pattern exists (Office Action, pg. 3). Therefore, Wong et al. cannot disclose or suggest automatically establishing a trunk between a first network device and a second network device when a communication pattern is determined to exist, as recited in claim 1. Moreover, Wong et al. cannot disclose or suggest that the automatically establishing includes automatically establishing two or more trunks between the first network device and second network device, as recited in claim 5.

Wong et al. specifically discloses a single trunk T_3 between packet switch 10 (which the Examiner alleges corresponds to the first network device) and server 3 (which the Examiner alleges corresponds to the second network device). The Examiner has not pointed to any section of Wong et al. that discloses establishing two or more trunks between packet switch 10 and server 3 or, more importantly, automatically establishing two or more trunks between the first network device and second network device, as recited in claim 5.

Appellant notes that Chaudri et al. does not disclose or suggest establishing trunks between network devices. Therefore, Chaudri et al. cannot disclose or suggest automatically establishing two or more trunks between the first network device and second network device, as recited in claim 5.

For at least the foregoing reasons, Appellant submits that the rejection of claim 5 under

35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

3. Claims 8-11.

Claim 8 is directed to a system for establishing at least one trunk between a first network device and a second network device. The system includes means for monitoring at least one of traffic to the second network device or traffic from the second network device; means for determining, based on the monitoring, if a communication pattern exists; and means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist. Wong et al. and Chaudri et al., whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, Wong et al. and Chaudri et al. do not disclose or suggest means for monitoring at least one of traffic to the second network device or traffic from the second network device. The Examiner does not specifically address this feature in the Office Action. Instead, the Examiner alleges that Wong et al. discloses "receiving via the first network device (10) at least one of a source address and a destination address in packets destined for or received from the second network device (server 3)(see fig. 1 and paragraph 0030) (Office Action, pg. 3). Appellant respectfully submits that the Examiner has misinterpreted the above feature of claim 8.

Claim 8 does not recite receiving via a first network device at least one of a source address and a destination address in packets destined for or received from the second network device. Instead, claim 8 specifically recites means for monitoring at least one of traffic to the second network device or traffic from the second network device. One skilled in the art would

readily appreciate that receiving packets is not the same as monitoring at least one of traffic to a second network device or traffic from a second network device. The Examiner has not addressed the above feature of claim 8. Accordingly, a *prima facie* case of obviousness has not been established with respect to claim 8.

Nevertheless, in Fig. 1, Wong et al. depicts a network system 2 that includes a packet switch 10 that connects to a server 3 and a group of clients via a switch 7. The Examiner relies on packet switch 10 as allegedly corresponding to the recited first device and on server 3 as allegedly corresponding to the second network device (Office Action, pg. 3). With this interpretation in mind, this figure of Wong et al. in no way discloses or suggests means for monitoring at least one of traffic to the second network device or traffic from the second network device, as would be required by the Examiner's interpretation of claim 8.

At para. 0030, Wong et al. discloses:

> FIG. 1 shows a schematic block diagram at 2 of an exemplary local area network system employing methods and apparatus for load balancing in trunking and link aggregation in accordance with the present invention. The network system 2 includes: a high speed server 3 having a plurality of network ports 4 for transmitting and receiving data packets via corresponding network links; a plurality of clients 5 each having at least one network port 6 for transmitting and receiving data packets to and from device including the server 3 via corresponding network data streams; a packet switch 7 having a plurality of client network ports 8 for transmitting and receiving data packets to and from corresponding ones of the clients 5 via corresponding network links, and a plurality of network ports 9; and a packet switch 10 providing load balancing for trunked, or aggregated, links in accordance with the present invention as further explained below.

This section of Wong et al. discloses that clients 5 include a network port 6 for transmitting and receiving data packets to and from server 3. As set forth above, the Examiner relies on packet switch 10 as allegedly corresponding to the recited first device and on server 3 as allegedly

corresponding to the second network device (Office Action, pg. 3). This section of Wong et al. is in no way related to means for monitoring at least one of traffic to server 3 or traffic from server 3, as would be required by the Examiner's interpretation of claim 8.

Wong et al. and Chaudri et al. do not further disclose or suggest means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist, as also recited in claim 8. The Examiner relies on Fig. 1, and paras. 0033, 0036, and 0042, of Wong et al. for allegedly disclosing automatically establishing a trunk between a first network device and a second network device (Office Action, pg. 3). Appellant submits that the Examiner has misinterpreted the above feature of claim 8.

Claim 8 does not merely recite automatically establishing a trunk between a first network device and a second network device. Instead, claim 8 specifically recites means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist. The Examiner does not address this feature in the Office Action. Therefore, the Examiner has not established a *prima facie* basis for denying patentability with respect to claim 8.

Moreover, the Examiner admits that Wong et al. does not disclose determining if a communication pattern exists. Therefore, the Examiner cannot reasonably allege that Wong et al. discloses means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist, as recited in claim 8.

Nevertheless, Fig. 1 of Wong et al. depicts a trunk T_3 between packet switch 10 (which

the Examiner alleges corresponds to the first network device recited in claim 1) and server 3 (which the Examiner alleges corresponds to the second network device recited in claim 1). This figure of Wong et al. in no way discloses or suggests that trunk T_3 is automatically established or that trunk T_3 is automatically established when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 8. Instead, Wong et al. merely discloses that trunked links and trunked ports are formed by aggregating any integer number of ports 14 and links 15 (para. 0033).

At para. 0033, Wong et al. discloses:

> The packet switch 10 includes means for link aggregation and trunking wherein a plurality of trunked links 17 are formed by aggregating sets of four of the network links 15 as further explained below. In one embodiment, the packet switch 10 may include a maximum of eight trunked ports designated P_0, P_1, P_2, P_3, P_4, P_5, P_6, and P_7 formed by aggregating ports A_0-A_3, ports A_4-A_7, ports B_0-B_3, ports B_4-B_7, ports C_0-C_3, and ports C_4-C_7, ports D_0-D_3, and ports D_4-D_7 respectively. In the depicted embodiment, the packet switch 10 includes seven trunked ports designated P_0, P_1, P_2, P_3, P_4, P_5, and P_7 wherein ports C_0-C_3 are not trunked. Port C_0 is shown to be coupled to a CLIENT_7 via one of the regular non-trunking network links 15. The eight trunked ports P_0, P_1, P_2, P_3, P_4, P_5, and P_7 are respectively coupled to eight trunked links designated T_0, T_1, T_2, T_3, T_4, T_5, and T_7. In varying embodiments of the present invention, switch 10 may include any integer number of ports 14, and trunked ports and trunked links may be formed by aggregating any integer number of ports 14 and links 15.

This section of Wong et al. merely discloses that that trunked links and trunked ports are formed by aggregating any integer number of ports 14 and links 15. This section of Wong et al. in no way discloses or suggests means for automatically establishing trunk T_3 when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 8.

At para. 0036, Wong et al. discloses:

> Each of the plurality of clients 5 communicates with the server 3 via the network links and the switches 7 and 10. Because traffic is heavy between the server 3 and the plurality of clients 5, it is desirable to provide a communication link having a maximized bandwidth between the clients 5 and server 3. In the depicted embodiment, the ports B_4-B_7 of switch 10 are respectively connected to the ports 4 designated S_0-S_3 of the server 3 via the trunked link T_3, and the ports D_4-D_7 of switch 10 are respectively connected to the ports 9 designated SW_0-SW_3 of the switch 7 via the trunked link T_6. Data streams are provided between the server 3 and the plurality of clients 5 via the trunked link T_3, switch 10, trunked link T_6, and switch 7.

This section of Wong et al. merely discloses that a trunk T_3 exists between packet switch 10 and server 3. This section of Wong et al. in no way discloses or suggests means for automatically establishing trunk T_3 when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 8.

At para. 0042, Wong et al. discloses:

> In accordance with a first MAC address table based load balancing scheme, further described below, the load balancing unit 190 implements a dynamic trunked port mapping scheme wherein the destination port for a particular packet (selected from the plurality of ports of its corresponding destination trunked link) is determined based on the source address of the packet.

This section of Wong et al. merely discloses that load balancing unit 190 implements a dynamic trunked port mapping scheme where a destination port for a packet is determined based on the source address of the packet. This section of Wong et al. in no way discloses or suggests means for automatically establishing trunk T_3 when a communication pattern is determined to exist between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 8.

Appellant notes that Chaudri et al. does not disclose or suggest establishing trunks

between network devices. Therefore, Chaudri et al. cannot disclose or suggest means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist, as recited in claim 8.

The Examiner relies on Chaudri et al. for allegedly disclosing determining if a communication pattern exists and alleges that it would have been obvious to incorporate this feature of Chaudri et al. into the Wong et al. system to allow for "special handling of those packets within that device or by other networking devices in the network" (Office Action, pg. 3). Appellant submits that Examiner's motivation is merely conclusory and insufficient for establishing a *prima facie* case of obviousness. The Examiner's motivation falls short of logically explaining why one skilled in the art would be realistically motivated to combine Chaudri et al.'s alleged teaching of determining if a communication pattern exists into the Wong et al. system. Moreover, the Examiner does not point to any section of Wong et al. or Chaudri et al. to support the Examiner's allegation. Appellant submits that the Examiner motivation is impermissibly based on hindsight.

For at least the foregoing reasons, Appellant submits that the rejection of claim 8 under 35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

Claims 9-11 depend from claim 8. Therefore, Appellant requests that the rejection of claims 9-11 under 35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. be reconsidered and withdrawn for at least the reasons given above with respect to claim 8

4. Claims 14, 15, and 17.

Claim 14 is directed to a network device that includes a receiver configured to receive

packets having a source address and a destination address; and an internal rules checker configured to monitor the received source and destination addresses in the received packets, determine whether a communication pattern exists over a predetermined period of time, and establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists. Wong et al. and Chaudri et al., whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, Wong et al. and Chaudri et al. do not disclose or suggest an internal rules checker that is configured to monitor the received source and destination addresses in the received packets. The Examiner relies on element 170 in Wong et al.'s Fig. 1 and para. 0038 of Wong et al. for allegedly disclosing this feature (Office Action, pg. 4). Appellant disagrees with the Examiner's interpretation of Wong et al.

Element 170 in Fig. 1 of Wong et al. corresponds to a packet buffer. Packet buffer 170 of Wong et al. merely stores packets (see, for example, para. 0038). Wong et al. in no way discloses or suggests that packet buffer 170 is an internal rules checker that is configured to monitor the received source and destination addresses in the received packets, as recited in claim 14. The Examiner has not pointed to any section of Wong et al. that discloses that packet buffer 170 monitors received source and destination addresses in received packets.

At para. 0038, Wong et al. discloses:

> In accordance with the present invention, the switch 10 includes a load balanced trunked link port mapping system 168 which is depicted generally in FIG. 1 and which is further explained below. The system 168 generally includes: a packet

> buffer 170 coupled to receive packets from network nodes via the ports 14 and the trunking ports P; a packet routing unit 180 coupled with the buffer 170 for receiving packet header information including a source MAC address and a destination MAC address of each packet received by the switch, and for determining a destination port ID value associated with each received packet wherein the destination port ID value indicates a corresponding one of either the regular non-trunking ports 14 or one of the trunking ports P; and a load balancing unit 190 coupled with the packet buffer 170 and routing unit 180 and providing for selecting a one of the ports 14 of a destination trunking port P if the destination port ID value indicates one of the trunking ports for a received packet.

This section of Wong et al. merely discloses that buffer 170 receives packets from network nodes via ports 14 and trunking ports P. This section of Wong et al. is in no way related to an internal rules checker that is configured to monitor the received source and destination addresses in the received packets, as recited in claim 14.

Wong et al. and Chaudri et al. do not further disclose that the internal rules checker is configured to establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists, as also recited in claim 14. The Examiner does not address this feature with respect to claim 14. Instead, the Examiner appears to refer back to the rejection of claim 1 (Office Action, pg. 4). Claim 1 does not recite, however, an internal rules checker that is configured to establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists. Since the Examiner did not address this feature, a *prima facie* case of obviousness has not been established with respect to claim 14.

Nevertheless, with respect to the feature "automatically establishing the trunk between the first network device and second network device when the communication pattern is determined to exist" recited in claim 1, the Examiner relies on Fig. 1, and paras. 0033, 0036, and 0042, of

Wong et al. for allegedly disclosing automatically establishing a trunk between a first network device and a second network device (Office Action, pg. 3). Appellant submits that Wong et al. does not disclose or suggest an internal rules checker that is configured to establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists, as recited in claim 14.

At the outset, Appellant notes that the Examiner admits that Wong et al. does not disclose determining whether a communication pattern exists. Therefore, the Examiner cannot reasonably allege that Wong et al. discloses an internal rules checker that is configured to establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists, as recited in claim 14.

Nevertheless, Fig. 1 of Wong et al. depicts a trunk T_3 between packet switch 10 (which the Examiner alleges corresponds to the first network device recited in claim 1) and server 3 (which the Examiner alleges corresponds to the second network device recited in claim 1). Moreover, as set forth above, the Examiner relies on Wong et al.'s packet buffer 170 as allegedly corresponding to the recited internal rules checker. This figure of Wong et al. in no way discloses or suggests that packet buffer 170 (or any other device) establishes trunk T_3 in response to determining that a communication pattern exists between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 14. Instead, Wong et al. merely discloses that trunked links and trunked ports are formed by aggregating any integer number of ports 14 and links 15 (para. 0033).

At para. 0033, Wong et al. discloses:

> The packet switch 10 includes means for link aggregation and trunking wherein a plurality of trunked links 17 are formed by aggregating sets of four of the network links 15 as further explained below. In one embodiment, the packet switch 10 may include a maximum of eight trunked ports designated P_0, P_1, P_2, P_3, P_4, P_5, P_6, and P_7 formed by aggregating ports A_0-A_3, ports A_4-A_7, ports B_0-B_3, ports B_4-B_7, ports C_0-C_3, and ports C_4-C_7, ports D_0-D_3, and ports D_4-D_7 respectively. In the depicted embodiment, the packet switch 10 includes seven trunked ports designated P_0, P_1, P_2, P_3, P_4, P_5, and P_7 wherein ports C_0-C_3 are not trunked. Port C_0 is shown to be coupled to a CLIENT_7 via one of the regular non-trunking network links 15. The eight trunked ports P_0, P_1, P_2, P_3, P_4, P_5, and P_7 are respectively coupled to eight trunked links designated T_0, T_1, T_2, T_3, T_4, T_5, and T_7. In varying embodiments of the present invention, switch 10 may include any integer number of ports 14, and trunked ports and trunked links may be formed by aggregating any integer number of ports 14 and links 15.

This section of Wong et al. merely discloses that that trunked links and trunked ports are formed by aggregating any integer number of ports 14 and links 15. This section of Wong et al. in no way discloses or suggests that packet buffer 170 (or any other device) establishes trunk T_3 in response to determining that a communication pattern exists between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 14.

At para. 0036, Wong et al. discloses:

> Each of the plurality of clients 5 communicates with the server 3 via the network links and the switches 7 and 10. Because traffic is heavy between the server 3 and the plurality of clients 5, it is desirable to provide a communication link having a maximized bandwidth between the clients 5 and server 3. In the depicted embodiment, the ports B_4-B_7 of switch 10 are respectively connected to the ports 4 designated S_0-S_3 of the server 3 via the trunked link T_3, and the ports D_4-D_7 of switch 10 are respectively connected to the ports 9 designated SW_0-SW_3 of the switch 7 via the trunked link T_6. Data streams are provided between the server 3 and the plurality of clients 5 via the trunked link T_3, switch 10, trunked link T_6, and switch 7.

This section of Wong et al. merely discloses that a trunk T_3 exists between packet switch 10 and server 3. This section of Wong et al. in no way discloses or suggests that packet buffer 170 (or any other device) establishes trunk T_3 in response to determining that a communication pattern

exists between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 14.

At para. 0042, Wong et al. discloses:

> In accordance with a first MAC address table based load balancing scheme, further described below, the load balancing unit 190 implements a dynamic trunked port mapping scheme wherein the destination port for a particular packet (selected from the plurality of ports of its corresponding destination trunked link) is determined based on the source address of the packet.

This section of Wong et al. merely discloses that load balancing unit 190 implements a dynamic trunked port mapping scheme where a destination port for a packet is determined based on the source address of the packet. This section of Wong et al. in no way discloses or suggests that packet buffer 170 (or any other device) establishes trunk T_3 in response to determining that a communication pattern exists between packet switch 10 and server 3, as would be required by the Examiner's interpretation of Appellant's claim 14.

Appellant notes that Chaudri et al. does not disclose or suggest establishing trunks between network devices. Therefore, Chaudri et al. cannot disclose or suggest an internal rules checker that is configured to establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists, as recited in claim 14.

The Examiner relies on Chaudri et al. for allegedly disclosing determining whether a communication pattern exists and alleges that it would have been obvious to incorporate this feature of Chaudri et al. into the Wong et al. system to allow for "special handling of those packets within that device or by other networking devices in the network" (Office Action, pg. 3). Appellant submits that Examiner's motivation is merely conclusory and insufficient for

establishing a *prima facie* case of obviousness. The Examiner's motivation falls short of logically explaining why one skilled in the art would be realistically motivated to combine Chaudri et al.'s alleged teaching of determining, based on the monitoring, whether a communication pattern exists into the Wong et al. system. Moreover, the Examiner does not point to any section of Wong et al. or Chaudri et al. to support the Examiner's allegation. Appellant submits that the Examiner's motivation is impermissibly based on hindsight.

For at least the foregoing reasons, Appellant submits that the rejection of claim 14 under 35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

Claims 15 and 17 depend from claim 14. Therefore, Appellant requests that the rejection of claims 15 and 17 under 35 U.S.C. § 103(a) based on Wong et al. and Chaudri et al. be reconsidered and withdrawn for at least the reasons given above with respect to claim 14.

B. The rejection under 35 U.S.C. § 103(a) based on Wong et al. (U.S. Patent Application Pub. No. 2004/0037278) and Chaudri et al. (U.S. Patent No. 6,275,861), and further in view of Friedman et al. (U.S. Patent No. 5,949,788) should be reversed.

1. Claim 7.

Appellant's claim 7 depends from claim 1. The disclosure of Friedman et al. does not remedy the deficiencies in the disclosures of Wong et al. and Chaudri et al. set forth above with respect to claim 1. Therefore, claim 7 is patentable over Wong et al., Chaudri et al., and Friedman et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, this claim is patentable over Wong et al.,

Chaudri et al., and Friedman et al. for reasons of its own.

Claim 7 recites deactivating the trunk when the communication pattern is determined to no longer exist and reassigning the ports to new trunks if a new pattern is determined. The Examiner admits that Wong et al. and Chaudri et al. do not disclose this feature and relies on col. 10, lines 39-47, of Friedman et al. for allegedly disclosing this feature (Office Action, pp. 5-6). Appellant disagrees.

At col. 10, lines 39-47, Friedman et al. discloses:

> Periodically, in accordance with the TCMP herein disclosed, reselection processing is performed to determine whether any links should be activated or deactivated; i.e. added to or removed from participation in the trunk. In the preferred embodiment, reselection processing occurs approximately every ten (10) seconds upon expiration of a reselection processing timer although it should be appreciated that it may be desirable to employ other periods for reselection processing in a network.

This section of Friedman et al. discloses that a reselection process may be performed to determine if links within a trunk should be activated or deactivated. This section of Friedman et al. discloses deactivating links in a trunk and not deactivating a trunk. Therefore, this section of Friedman et al. does not disclose or suggest deactivating the trunk when the communication pattern is determined to no longer exist and reassigning the ports to new trunks if a new pattern is determined, as recited in claim 7.

Moreover, even assuming, for the sake of argument, that one skilled in the art could reasonably construe deactivating links within a trunk to be equivalent to deactivating a trunk, this section of Friedman et al. in no way discloses or suggests that the deactivating of links within a trunk is performed when a communication pattern is determined to no longer exist, as specifically recited in claim 7.

Also, even assuming, for the sake of argument, that Friedman et al. can reasonably be said to disclose deactivating the trunk when the communication pattern is determined to no longer exist and reassigning the ports to new trunks if a new pattern is determined, Appellant submits that one skilled in the art would not seek to combine this alleged feature of Friedman et al. with the systems of Wong et al. and Chaudri et al., absent impermissible hindsight.

With respect to motivation, the Examiner alleges that "it would have been obvious ... to incorporate the teaching of Friedman such as deactivating the trunk when the communication pattern is determined to no longer exist and reassigns ports to new trunks if a is new pattern is determined into the system of Wong and Chaudri in order to maximize the bandwidth of the trunk and to assure that the maximum realizable bandwidth is available to the greatest number of connected network devices" and points to col. 3, line 65, to col. 4, line 5, of Friedman et al. for support (Office Action, pg. 6). Appellant disagrees.

Initially, Appellant notes that is unclear how deactivating a trunk when a communication pattern no longer exists would maximize the bandwidth of the trunk, as the Examiner alleges. The Examiner does not explain how the bandwidth of a trunk becomes maximized when the trunk is deactivated. The Examiner does not logically explain what is meant by the above allegation. Appellant submits that the Examiner's motivation is merely conclusory and insufficient for establishing a *prima facie* case of obviousness.

Nonetheless, at col. 3, line 65, to col. 4, line 5, Friedman et al. discloses:

> The presently disclosed Trunk Control Message Protocol (TCMP) is employed to provide for dynamic control of the configuration and operation of a trunk port and its constituent MAC interfaces. More specifically, the TCMP detects and handles physical configuration errors and ensures the orderly activation and deactivation of MACs associated with a trunk port 26. Additionally, the trunk control message

> protocol optimizes the trunk configuration via a link selection process which maximizes the bandwidth of the trunk and which attempts to assure that the maximum realizable bandwidth is available to the greatest number of connected network devices in view of the operational status of the MACs and links involved in communication over a particular trunk.

This section of Friedman et al. discloses that a TCMP ensures the orderly activation and deactivation of MACs associated with a trunk port 26. This section of Friedman et al. is in no way related to deactivating a trunk when a communication pattern is determined to no longer exist and reassigning the ports to new trunks if a new pattern is determined, as recited in claim 7, or as the Examiner alleges, maximizing the bandwidth of a trunk by deactivating the trunk.

Appellant submits that the Examiner's motivation for combining Wong et al., Chaudri et al., and Friedman et al. is based on impermissible hindsight.

For at least the foregoing reasons, Appellant submits that the rejection of claim 7 under 35 U.S.C. § 103(a) based on Wong et al., Chaudri et al., and Friedman et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

2. Claim 13.

Appellant's claim 13 depends from claim 8. The disclosure of Friedman et al. does not remedy the deficiencies in the disclosures of Wong et al. and Chaudri et al. set forth above with respect to claim 8. Therefore, claim 13 is patentable over Wong et al., Chaudri et al., and Friedman et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 8. Moreover, this claim is patentable over Wong et al., Chaudri et al., and Friedman et al. for reasons of its own.

Claim 13 recites means for deactivating the at least one trunk when the communication pattern is determined to no longer exist. The Examiner admits that Wong et al. and Chaudri et al.

do not disclose this feature and relies on col. 10, lines 39-47, of Friedman et al. for allegedly disclosing this feature (Office Action, pp. 5-6). Appellant disagrees.

At col. 10, lines 39-47, Friedman et al. discloses:

> Periodically, in accordance with the TCMP herein disclosed, reselection processing is performed to determine whether any links should be activated or deactivated; i.e. added to or removed from participation in the trunk. In the preferred embodiment, reselection processing occurs approximately every ten (10) seconds upon expiration of a reselection processing timer although it should be appreciated that it may be desirable to employ other periods for reselection processing in a network.

This section of Friedman et al. discloses that a reselection process may be performed to determine if links within a trunk should be activated or deactivated. This section of Friedman et al. discloses deactivating links in a trunk and not deactivating a trunk. Therefore, this section of Friedman et al. does not disclose or suggest means for deactivating the at least one trunk when the communication pattern is determined to no longer exist, as recited in claim 13.

Moreover, even assuming, for the sake of argument, that one skilled in the art could reasonably construe deactivating links within a trunk to be equivalent to deactivating a trunk, this section of Friedman et al. in no way discloses or suggests that the deactivating of links within a trunk is performed when a communication pattern is determined to no longer exist, as specifically recited in claim 13.

Also, even assuming, for the sake of argument, that Friedman et al. can reasonably be said to disclose means for deactivating the at least one trunk when the communication pattern is determined to no longer exist, Appellant submits that one skilled in the art would not seek to combine this alleged feature of Friedman et al. with the systems of Wong et al. and Chaudri et al., absent impermissible hindsight.

With respect to motivation, the Examiner alleges that "it would have been obvious ... to incorporate the teaching of Friedman such as deactivating the trunk when the communication pattern is determined to no longer exist and reassigns ports to new trunks if a is new pattern is determined into the system of Wong and Chaudri in order to maximize the bandwidth of the trunk and to assure that the maximum realizable bandwidth is available to the greatest number of connected network devices" and points to col. 3, line 65, to col. 4, line 5, of Friedman et al. for support (Office Action, pg. 6). Appellant disagrees.

Initially, Appellant notes that is unclear how deactivating a trunk when a communication pattern no longer exists would maximize the bandwidth of the trunk, as the Examiner alleges. The Examiner does not explain how the bandwidth of a trunk becomes maximized when the trunk is deactivated. The Examiner does not logically explain what is meant by the above allegation. Appellant submits that the Examiner's motivation is merely conclusory and insufficient for establishing a *prima facie* case of obviousness.

Nonetheless, at col. 3, line 65, to col. 4, line 5, Friedman et al. discloses:

> The presently disclosed Trunk Control Message Protocol (TCMP) is employed to provide for dynamic control of the configuration and operation of a trunk port and its constituent MAC interfaces. More specifically, the TCMP detects and handles physical configuration errors and ensures the orderly activation and deactivation of MACs associated with a trunk port 26. Additionally, the trunk control message protocol optimizes the trunk configuration via a link selection process which maximizes the bandwidth of the trunk and which attempts to assure that the maximum realizable bandwidth is available to the greatest number of connected network devices in view of the operational status of the MACs and links involved in communication over a particular trunk.

This section of Friedman et al. discloses that a TCMP ensures the orderly activation and deactivation of MACs associated with a trunk port 26. This section of Friedman et al. is in no

way related to means for deactivating the at least one trunk when the communication pattern is determined to no longer exist, as recited in claim 13, or as the Examiner alleges, maximizing the bandwidth of a trunk by deactivating the trunk.

Appellant submits that the Examiner's motivation for combining Wong et al., Chaudri et al., and Friedman et al. is based on impermissible hindsight.

For at least the foregoing reasons, Appellant submits that the rejection of claim 13 under 35 U.S.C. § 103(a) based on Wong et al., Chaudri et al., and Friedman et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

3. Claim 16.

Appellant's claim 16 depends from claim 14. The disclosure of Friedman et al. does not remedy the deficiencies in the disclosures of Wong et al. and Chaudri et al. set forth above with respect to claim 14. Therefore, claim 16 is patentable over Wong et al., Chaudri et al., and Friedman et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 14. Moreover, this claim is patentable over Wong et al., Chaudri et al., and Friedman et al. for reasons of its own.

Claim 16 recites that the internal rules checker is further configured to deactivate the one or more trunks when the communication pattern is determined to no longer exist. The Examiner admits that Wong et al. and Chaudri et al. do not disclose this feature and relies on col. 10, lines 39-47, of Friedman et al. for allegedly disclosing this feature (Office Action, pp. 5-6). Appellant disagrees.

At col. 10, lines 39-47, Friedman et al. discloses:

Periodically, in accordance with the TCMP herein disclosed, reselection

> processing is performed to determine whether any links should be activated or deactivated; i.e. added to or removed from participation in the trunk. In the preferred embodiment, reselection processing occurs approximately every ten (10) seconds upon expiration of a reselection processing timer although it should be appreciated that it may be desirable to employ other periods for reselection processing in a network.

This section of Friedman et al. discloses that a reselection process may be performed to determine if links within a trunk should be activated or deactivated. This section of Friedman et al. discloses deactivating links in a trunk and not deactivating a trunk. Therefore, this section of Friedman et al. does not disclose or suggest an internal rules checker that is configured to deactivate the one or more trunks when the communication pattern is determined to no longer exist, as recited in claim 16.

Moreover, even assuming, for the sake of argument, that one skilled in the art could reasonably construe deactivating links within a trunk to be equivalent to deactivating a trunk, this section of Friedman et al. in no way discloses or suggests that the deactivating of links within a trunk is performed when a communication pattern is determined to no longer exist, as specifically recited in claim 16.

Also, even assuming, for the sake of argument, that Friedman et al. can reasonably be said to disclose an internal rules checker that is configured to deactivate the one or more trunks when the communication pattern is determined to no longer exist, Appellant submits that one skilled in the art would not seek to combine this alleged feature of Friedman et al. with the systems of Wong et al. and Chaudri et al., absent impermissible hindsight.

With respect to motivation, the Examiner alleges that "it would have been obvious ... to incorporate the teaching of Friedman such as deactivating the trunk when the communication

pattern is determined to no longer exist and reassigns ports to new trunks if a is new pattern is determined into the system of Wong and Chaudri in order to maximize the bandwidth of the trunk and to assure that the maximum realizable bandwidth is available to the greatest number of connected network devices" and points to col. 3, line 65, to col. 4, line 5, of Friedman et al. for support (Office Action, pg. 6). Appellant disagrees.

Initially, Appellant notes that is unclear how deactivating a trunk when a communication pattern no longer exists would maximize the bandwidth of the trunk, as the Examiner alleges. The Examiner does not explain how the bandwidth of a trunk becomes maximized when the trunk is deactivated. The Examiner does not logically explain what is meant by the above allegation. Appellant submits that the Examiner's motivation is merely conclusory and insufficient for establishing a *prima facie* case of obviousness.

Nonetheless, at col. 3, line 65, to col. 4, line 5, Friedman et al. discloses:

> The presently disclosed Trunk Control Message Protocol (TCMP) is employed to provide for dynamic control of the configuration and operation of a trunk port and its constituent MAC interfaces. More specifically, the TCMP detects and handles physical configuration errors and ensures the orderly activation and deactivation of MACs associated with a trunk port 26. Additionally, the trunk control message protocol optimizes the trunk configuration via a link selection process which maximizes the bandwidth of the trunk and which attempts to assure that the maximum realizable bandwidth is available to the greatest number of connected network devices in view of the operational status of the MACs and links involved in communication over a particular trunk.

This section of Friedman et al. discloses that a TCMP ensures the orderly activation and deactivation of MACs associated with a trunk port 26. This section of Friedman et al. is in no way related to an internal rules checker that is configured to deactivate the one or more trunks when the communication pattern is determined to no longer exist, as recited in claim 16, or as the

Examiner alleges, maximizing the bandwidth of a trunk by deactivating the trunk.

Appellant submits that the Examiner's motivation for combining Wong et al., Chaudri et al., and Friedman et al. is based on impermissible hindsight.

For at least the foregoing reasons, Appellant submits that the rejection of claim 16 under 35 U.S.C. § 103(a) based on Wong et al., Chaudri et al., and Friedman et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

C. The rejection under 35 U.S.C. § 103(a) based on Wong et al. (U.S. Patent Application Pub. No. 2004/0037278) and Chaudri et al. (U.S. Patent No. 6,275,861), and further in view of Annaamalai et al. (U.S. Patent No. 6,445,715) should be reversed.

1. Claim 12.

Appellant's claim 12 depends from claim 8. The disclosure of Annaamalai et al. does not remedy the deficiencies in the disclosures of Wong et al. and Chaudri et al. set forth above with respect to claim 8. Therefore, claim 12 is patentable over Wong et al., Chaudri et al., and Annaamalai et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 8. Moreover, this claim is patentable over Wong et al., Chaudri et al., and Annaamalai et al. for reasons of its own.

Claim 12 recites that the means for automatically establishing the at least one trunk includes associating one or more trunk control bits with each port, where the trunk control bits indicate a status of the port. The Examiner admits that Wong et al. and Chaudri et al. do not disclose this feature and relies on col. 8, lines 15-23, of Annaamalai et al. for allegedly disclosing this feature (Office Action, pg. 7).

Appellant submits that even assuming, for the sake of argument, that the above section of Annaamalai et al. discloses means for automatically establishing the at least one trunk includes associating one or more trunk control bits with each port, where the trunk control bits indicate a status of the port, one skilled in the art would not have been motivated to combine this alleged teaching of Annaamalai et al. with the system disclosed by Wong et al. and Chaudri et al., absent impermissible hindsight. With respect to motivation, the Examiner alleges that "it would have been obvious ... to associate one or more trunk control bits with each port, where the trunk control bits indicate the status of the port, because it is desirable to specify current operational trunk status of the port to show whether a port is in use, failed or active in order to respond port initiation request" (Office Action, pg. 7). Appellant notes that Wong et al. and Chaudri et al. do not disclose port initiation requests. The Examiner does not explain how incorporating Annaamalai et al.'s trunk control bits into the Wong et al. and Chaudri et al. systems would allow Wong et al.'s and Chaudri et al.'s system to respond to port initiation requests. Appellant submits that the Examiner's motivation is merely a conclusory statement regarding an alleged benefit of the combination. Such motivation does not satisfy the requirements of 35 U.S.C. § 103.

For at least the foregoing reasons, Appellant submits that the rejection of claim 12 under 35 U.S.C. § 103(a) based on Wong et al., Chaudri et al., and Annaamalai et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

2. Claim 18.

Appellant's claim 18 depends from claim 14. The disclosure of Annaamalai et al. does not remedy the deficiencies in the disclosure of Wong et al. and Chaudri et al. set forth above

with respect to claim 14. Therefore, claim 18 is patentable over Wong et al., Chaudri et al., and Annaamalai et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 14. Moreover, this claim is patentable over Wong et al., Chaudri et al., and Annaamalai et al. for reasons of its own.

Claim 18 recites at least one register configured to store trunking information. Claim 18 further recites that when establishing the one or more trunks, the internal rules checker sets at least one bit in the at least one register based on the determined communication pattern. Wong et al., Chaudri et al., and Annaamalai et al. do not disclose or suggest this combination of features.

For example, Wong et al., Chaudri et al., and Annaamalai et al. do not disclose or suggest at least one register configured to store trunking information. The Examiner admits that Wong et al. and Chaudri et al. does not disclose this feature and relies on col. 8, lines 15-23, of Annaamalai et al. for allegedly disclosing this feature (Office Action, pg. 7). Appellant disagrees.

At col. 8, lines 15-23, Annaamalai et al. discloses:

> The TOS subfield 422 is a 1-bit field that normally specifies the present operational trunk status of the port P; an exception is when the port is in a DTP negotiation phase, at which point the subfield specifies trunk-status-to-be for the port. In the illustrative embodiment, the operational status is either access (NT) or trunk (T). PIC 360 of each port P is configured to operate initially as a non-trunk (i.e., access) port and, if the port fails to negotiate to a trunk status, it remains an access port.

This section of Annaamalai et al. discloses that a trunk operational status (TOS) field can specify the operational status of a port P. Annaamalai et al. discloses that the TOS field is part of a message 400 that a dynamic trunk protocol (DTP) conveys over a trunk capable link (see col. 7, lines 58-62). Annaamalai et al. does not disclose or suggest that message 400 is a register.

Therefore, Annaamalai et al. does not disclose at least one register configured to store trunking information, as recited in claim 18.

Appellant submits that even assuming, for the sake of argument, that one or more of the above sections of Annaamalai et al. can reasonably be alleged to disclose at least one register configured to store trunking information, one skilled in the art would not have been motivated to combine this alleged teaching of Annaamalai et al. with Wong et al. and Chaudri et al., absent impermissible hindsight. With respect to motivation, the Examiner alleges that "it would have been obvious ... to set at least one bit in at least one register, because it is desirable to specify current operational trunk status of the port to show whether a port is in use, failed or active in order to respond port initiation request" (Office Action, pg. 7). Appellant notes that Wong et al. and Chaudri et al. do not disclose port initiation requests. The Examiner does not explain how incorporating Annaamalai et al.'s alleged disclosure of setting at least one bit in a register into the system of Wong et al. and Chaudri et al. would allow the system of Wong et al. and Chaudri et al. to respond to port initiation requests. Appellant submits that the Examiner's motivation is merely a conclusory statement regarding an alleged benefit of the combination. Such motivation does not satisfy the requirements of 35 U.S.C. § 103.

For at least the foregoing reasons, Appellant submits that the rejection of claim 18 under 35 U.S.C. § 103(a) based on Wong et al., Chaudri et al., and Annaamalai et al. is improper. Accordingly, Appellant requests that the rejection be reversed.

VIII. CONCLUSION

In view of the foregoing arguments, Appellant respectfully solicits the Honorable Board to reverse the Examiner's rejections of claims 1-18 under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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IX. CLAIM APPENDIX

1. A method for establishing a trunk between first and second network devices, comprising:

monitoring, via the first network device, at least one of a source address or destination address in packets destined for or received from the second network device;

determining, based on the monitoring, whether a communication pattern exists; and

automatically establishing the trunk between the first network device and second network device when the communication pattern is determined to exist.

2. The method of claim 1 wherein the determining whether a communication pattern exists includes:

detecting a predetermined number of packets having identical source or destination addresses.

3. The method of claim 2 wherein the detecting occurs over a predetermined period of time.

4. The method of claim 1 wherein the first network device includes a multiport switch and the second network device includes a server.

5. The method of claim 1 wherein automatically establishing the trunk includes:

automatically establishing two or more trunks between the first network device and second network device.

6. The method of claim 1 wherein automatically establishing the trunk includes:

assigning at least two ports on the first network device to the trunk.

7. The method of claim 6 further comprising:

deactivating the trunk when the communication pattern is determined to no longer exist and reassigning the ports to new trunks if a new pattern is determined.

8. A system for establishing at least one trunk between a first network device and a second network device, comprising:

means for monitoring at least one of traffic to the second network device or traffic from the second network device;

means for determining, based on the monitoring, if a communication pattern exists; and

means for automatically establishing the at least one trunk between the first network device and the second network device when a communication pattern is determined to exist.

9. The system of claim 8 wherein the means for determining if a communication pattern exists includes:

means for detecting a predetermined number of packets having identical source or destination addresses.

10. The system of claim 8 wherein the first network device includes a multiport switch and the second network device includes a server.

11. The system of claim 8 wherein the means for automatically establishing the at least one trunk comprises:

means for associating two or more ports of the first network device with each of the at least one trunk.

12. The system of claim 11 wherein the means for automatically establishing the at least one trunk further comprises:

associating one or more trunk control bits with each port, the trunk control bits indicating a status of the port.

13. The system of claim 8 further comprising:

means for deactivating the at least one trunk when the communication pattern is determined to no longer exist.

14. A network device comprising:

a receiver configured to receive packets having a source address and a destination

address; and

an internal rules checker configured to monitor the received source and destination addresses in the received packets, determine whether a communication pattern exists over a predetermined period of time, and establish one or more trunks between the network device and at least one other network device in response to determining that a communication pattern exists.

15. The network device of claim 14 wherein, when determining whether a communication pattern exists, the internal rules checker is configured to:

detect a predetermined number of packets having identical source or destination addresses over the predetermined period of time.

16. The network device of claim 14 wherein the internal rules checker is further configured to:

deactivate the one or more trunks when the communication pattern is determined to no longer exist.

17. The network device of claim 14 wherein, when establishing the one or more trunks, the internal rules checker is configured to:

assign at least two ports on the network device to each trunk.

18. The network device of claim 14 further comprising:

at least one register configured to store trunking information,

wherein, when establishing the one or more trunks, the internal rules checker sets at least one bit in the at least one register based on the determined communication pattern.